

**A New Species of *Apocharips* from Costa Rica
(Hymenoptera: Cynipoidea, Charipidae)**

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Abstract.—*Apocharips hansonii*, new species, is described from Costa Rica. The wasp was reared from galls of Psyllidae. This is the first record of the genus *Apocharips* in the New World. Several unusual morphological features of the new species are discussed and illustrated.

Paul Hanson of the Universidad de Costa Rica reared a few specimens of a charipid from galls of the psyllid genus *Trioza* Förster that were collected at high elevations in Costa Rica. Charipids reared from Psyllidae belong in the subfamily Charipinae. Menke and Evenhuis (1991) recognized five genera of Charipidae with the subfamily Charipinae being represented by *Dilyta* Förster and *Apocharips* Fergusson. Hanson's material belongs to the last genus and establishes that *Apocharips* occurs in the Western Hemisphere. The specimens represent a new species.

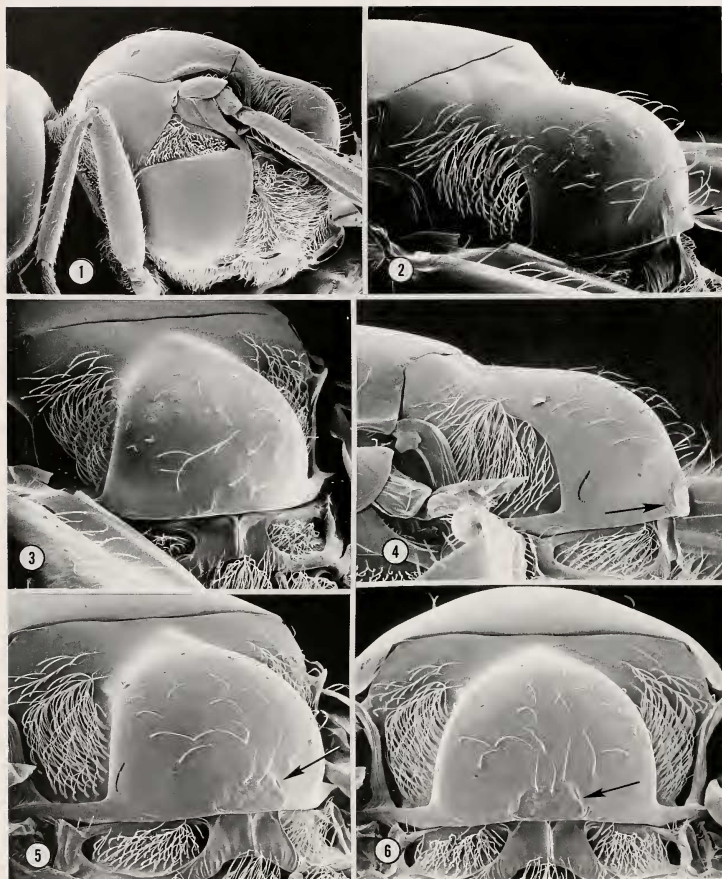
Carver (1993) recognized a sixth charipid genus, *Thoreanana* Girault, an Australian taxon that she removed from synonymy with *Alloxysta*, and assigned to Charipinae. *Thoreanana* has a small, basal tergum like *Apocharips*, but the antenna has 10-11 flagellomeres in the male and 9-10 in the female. All other genera of Charipidae have 12 male and 11 female flagellomeres.

The genus *Apocharips* was described by Fergusson (1986) for a European wasp now known by the name *trapezoidea* (Hartig) (see Evenhuis, 1982). Menke and Evenhuis (1991) listed four Old World species in the genus, all reared from Psyllidae. The new species is assigned to *Apocharips* because it has a small tergum 1 (Fig. 9) and the veins of the marginal cell reach the wing margin. However, unlike other members of the genus, the apex of the scutellum has an apical boss (Figs. 2-6) rather than a clearly formed M-shaped carina. Thus, in *Apocharips* the condition of the scutellar apex varies.

The presence of carinae at the apex of the scutellum was listed by Menke and Evenhuis (1991) as an autapomorphy of the subfamily Charipinae, but it is now clear that this character has limited value. Carver (1992) described and illustrated a new species, *Alloxysta carinata* (Alloxystinae), from Australia that has strong scutellar carinae apically. Thus at least one member of Alloxystinae has a character thought to be unique to Charipinae by Menke and Evenhuis. The new Costa Rican *Apocharips* described here further muddles the subfamily distinction since it only has a scutellar boss.

The new species has most of the other attributes of the subfamily listed by Menke and Evenhuis (1991, table 1), some of which are depicted here: two mandibular teeth (Fig. 11), no frontoclypeal sulcus (Fig. 11), and pronotum with lateral carina (Fig. 1). I did not check condition of the spiracles on tergum VI because of the small number of specimens available, but assume that they are narrowly separated as in other species of the genus.

The new species has another feature that is more intriguing than the condition of the scutellum. The face has converging ridges around the clypeus (Figs. 10-11). Such ridges appear to be unknown in any other member of the Charipidae, but are fairly common in the gall wasp family Cynipidae. This is evidently a parallelism.



Figs. 1-6. Male thorax features of *Apocharips hansonii*, specimens from Volcan Poás. 1, left side of thorax. 2, 3, posterolateral view of metanotum showing poorly defined apical boss (arrow). 4-6, left side, posterolateral, and rear views respectively, of metanotum showing more clearly defined apical boss (arrow).

***Apocharips hansonii* Menke, new species**

Black except as follows: scape and flagellomere I straw-colored; trochanters, apex of fore- and midfemora, foretibia, and foretarsomeres I-IV, straw-colored (midtibia and tarsus similar but darker). Face with numerous parallel ridges between eye and mandible base (Figs. 10-11). Flagellomeres I-IV of female antenna without linear tyli, but tyli present on V-XII; flagellomere II shorter than III, proportions of length of first three female flagellomeres: 6:3.5:4. Flagellomeres I-III of male antenna without tyli, but tyli present on remaining ones (Figs. 1-2); flagellomere I sinuate on outer side, longer than either II or III, proportions of flagellomeres I-III: 8:5.5:6. Apex of scutellum with a weak triangular boss that is not delimited by carinae (Figs. 2-3), or incompletely so (Figs. 4-6). Metanotum with median longitudinal carina (Figs. 3, 6). Vein stub from marginal cell as long as flagellomere II. Female 1.7 mm long, males 1.5-2 mm long.

Types.— Holotype female: Costa Rica, Cartago Prov., La Cangreja, 1950 m, March-May, 1992, Malaise trap operated by Paul Hanson (in National Museum of Natural History, Washington DC). Paratype males (four): one same data as holotype; two males, Alajuela Prov., Parque Nacional Volcan Poás, 2500 m, May 26, 1991, ex *Trioxa* sp. leaf gall on *Phoebe* or *Nectandra* (Lauraceae), collected by Paul Hanson; one male, same locality and host, Sept. 22, 1991, collected by Paul Hanson. Paratypes will be deposited in the Museo de Insectos, Universidad de Costa Rica, and the National Museum of Natural History.

Discussion.— *Apocharips hansonii* differs from the Old World species *trapezoidea* in a number of significant ways. *A. hansonii* has facial ridges that converge on the clypeus (Figs. 10-11), no tyli on the first three male flagellomeres (Fig. 7), a feeble triangular boss on the scutellum (Figs. 2-6), and a carina on the metanotum (Figs. 3, 6); these features immediately separate *hansonii* from *trapezoidea*. I have examined a single female of *trapezoidea* (Hartig), and the figures in the well illustrated description of *trapezoidea* by Kierych (1979). *A. trapezoidea* lacks facial ridges, the male has tyli on all flagellomeres, the scutellum has an M-shaped

carina apically, and the metanotum lacks a median carina. The head of *hansonii* in frontal view is more circular (Fig. 10) than that of *trapezoidea*. In the latter species the area below the eyes is more elongate and narrowed toward the mandibles. The spur on the marginal cell is longer in *hansonii*, particularly in the male.

Distribution.— Known only from elevations between 1950-2500 m in Costa Rica.

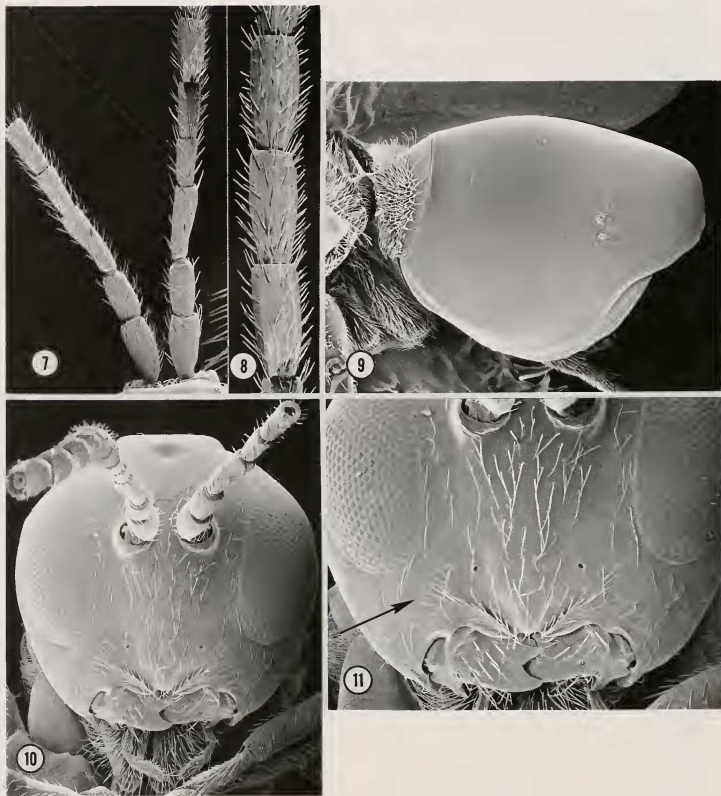
Etymology.— This tiny wasp is named after Paul Hanson who, by running many Malaise traps over a period of years, has probably sampled the micro-Hymenoptera fauna of Costa Rica more thoroughly than anyone else.

ACKNOWLEDGEMENTS

The manuscript was reviewed by James Carpenter, American Museum of Natural History, New York; David Wahl, American Entomological Institute, Gainesville; and Alma Solis and David Nickle, Systematic Entomology Laboratory, USDA, Washington D.C. Their critiques are much appreciated.

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Figs. 7-11. Male features of *Apocharips hansonii*. 7, dorsal view of scape, pedicel and flagellomeres 1-3 (and 4). 8, dorsal view of flagellomeres 4-6 enlarged from right antenna shown in fig. 7. 9, left side of abdomen. 10, 11, view of face, arrow points to facial ridges.